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Job Surveys Scrutinized by Media, Markets

Jobs data provide the first snapshot of the U.S. economy each month. As such, figures often move financial markets, particularly if they show any surprising shifts or trends that are expected to affect policy. Tight security keeps the numbers under wraps until 8:30 a.m. on the first Friday of the month, the appointed time for news media to release the report.

"The employment report is the most important and one of the most comprehensve data series that the government has," says Elizabeth Reiners, a money market analyst with Dean Witter Reynolds in New York City.

"Trends in the labor force are very important in how they relate to earnings and production. If more people are working and getting paid, there are greater jumps in sales, confidence, etc.," Reiners points out.

From start to finish, employment data are collected and released within a three-week period, making it one of the fastest turnarounds for a major economic report issued by the federal government. On separate but parallel tracks the Labor Department's Bureau of Labor Statistics (BLS) begins collection of the data from households and businesses.

Census Bureau enumerators conduct the Current Population Survey (CPS), also called the household survey, for BLS by making phone calls or personal visits to some 60,000 scientifically selected households around the country. The payroll survey — done through a federal-state cooperative program — collects information from about 360,000 non-farm business establishments.

Raw data arrive at BLS' main office in Washington, D.C., on the Monday and Tuesday before their release, entering the final days of a process that began only two weeks earlier. BLS officials will have just four days to crunch the numbers and prepare their analysis before the press and public receive the data on the first Friday of the month.

BLS economist spend the early part of the week preparing a news release, including several pages of figures in tabular form, and a statement from BLS Deputy Commissioner William Barron. On Thursday morning, Bar-

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Issue Focuses on Ups, Downs of Job-Data Programs

Each month, DES, Research Administration releases a series of employment and unemployment reports that receive a considerable amount of attention from the media, economists, public and private policymakers, and businesses inside and outside the state.

These data series, which are published in a news release, *Arizona's Workforce*, and later in *Arizona Economic Trends*, are a product of two federal-state cooperative programs — the Current Employment Statistics (CES) and Local Area Unemployment Statistics (LAUS) programs. These program's primarily derive their data from an employment survey of business establishments, also known as the payroll survey, and from the Current Population Survey (CPS), conducted by the U.S Census Bureau.

Because Arizona is a relatively small state — in terms of population and size of its samples — wide monthly fluctuations in some of the data series, such as the unemployment rate, can and do occur. Also, because the payroll survey is dependent on businesses donating time to provide information, a delay in receiving data from firms makes the first release of

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ron meets with officials and analysts in the agency's employment division to discuss how they will present the data.

Once Barron and his deputies have approved the news release and statement, they are sent to the printers where 10,000 copies are made. Late Thursday afternoon, a BLS official calls the chairman of the Council of Economic Advisors to provide him with key data from the employment report, marking the first time the figures have left BLS. The council assists the White House in preparing any comments that President Bush or other officials might have in reaction to the data.

On the first Friday, reporters can get the report at 8 a.m., with any release of data embargoed for 8:30 a.m. Simultaneously, Barron briefs Labor Secretary Lynn Martin on the report and, almost every month, prepares to present it to Congress' Joint Economic Committee at 9:30 a.m.

Surveys Show Contrasting Views

The framework and concepts of the two surveys are quite different, a fact that often leads to a divergence of the two measures of employment derived from the data series. While confusion occasionally results from this divergence, analysts are quick to stress that they value both surveys, finding that together they provide a comprehensive view of labor market trends that would not be possible if there were only one set of data.

"It is important to have two surveys. ... I would be nervous without a check on the payrolls from the household survey," says economist Donald Ratajczak, director of Georgia State University's Economic Forecasting Center. He adds that the household survey is the only source of demographic data.

The household survey counts people, while the payroll survey counts jobs. This difference alone accounts for a great deal of the divergence in employment growth shown by the two data series, points out Bregger. An increase in multiple jobholding (persons holding two or more jobs) during the late 1980s means that the payroll survey will often show greater job growth than the household count.

Most private analysts say they get their best reading on the economy from the payroll survey, partly because it is derived from business records rather than a person's recollection of labor market activity as in the household survey. The payroll survey is "a more complete count, a large sample, and more consistent," says economist David Wyss of Data Resources, Inc., in Lexington, Mass.

BLS fashions its sample of payroll establishments from the listing of more than 6 million non-farm businesses that are covered by the unemployment insurance system in each of the 50 states and District of Columbia. About 98 percent of all non-farm employees are covered by the UI system.

While computerized data collection is used somewhat, the overwhelming majority of establishments in the survey submit information on their payrolls through the mail to state employment agencies. There the data are checked and transmitted to BLS' main office in Washington.

Handling data from the 360,000 firms in the survey each month is a "monumental" task, says George Werking, chief of BLS' division of monthly industry employment statistics. The BLS survey is the largest business survey anywhere in the world, he notes.

One week before the data are released, BLS analysts in Washington cut off the flow of figures in what they call "the first closing." They need the remaining few days to tabulate and analyze the data, explains Werking. At the first closing, the agency typically has 50 to 55 percent of the total sample in, a proportion that sometimes makes for sizable revisions in the following months.

By the "second closing" a month later, BLS has data from slightly more than 80 percent of respondents. Coverage goes as high as 90 percent in the third closing, which is two months after the initial estimates are released.

Issue Looks at Job-Data Programs

(continued from front page)
Arizona data — in time for the monthly press release - often susceptible to some revision.

These facts should not detract from the value of the data, but rather put the value of the data in perspective. And in order to give readers a general understanding of how these data series are derived on both a statewide and national basis — and clear up some misconceptions about these series — *Arizona Economic Trends* is publishing this month two articles on these data programs, plus a brief overview of plans for other Bureau of Labor Statistics' programs, operated by Research Administration in Arizona.

First, *AET* is reprinting a story from the *Daily Labor Report* that gives an overview of the monthly process of collecting and tabulating employment and unemployment data; the types of data collected and how they are used; and the plusses and minuses of the current system. Then, an article by CES/LAUS Supervisor Phillip Heinrich (page 5) looks at how Arizona's CES LAUS programs operate within the parameters of the national system; outlines several factors that affect the quality of Arizona's data; and points out Research Administration's plans for maintaining and improving the quality of these data series. Finally, a related story written by Research Administrator Dan Anderson (page 5) gives a brief glimpse at upcoming plans for these data series, as well as for other BLS programs under Research Administration.

Establishments provide information on five key questions: how many employees were on the payroll during the week that included the 12th of the month; how many employees are women; how many non-supervisory employees are there; what is the total payroll in dollars; and, what was the total of hours paid, including overtime, for the reference period.

From the data come BLS' monthly profile of employment, hours, and earnings in major industries. The payroll survey figures become part of several other major economic data series maintained by other federal agencies — including the industrial production index, personal income, real earnings, productivity indexes, and the leading economic indicators.

Households Provide Demographics

While the payroll survey provides industry data, the household survey offers a wealth of demographic information used to assess social as well as economic trends. The survey also provides the numbers that yield the most watched indicator of the series — the unemployment rate.

Some analysts find the household data more useful than payroll data at certain times. "I prefer to look at the household data at turning points," says economist Susan Sterne, who heads Economic Analysis Associates, Inc. in Stowe, Vt. She argues that the payroll survey has a big-business bias that keeps it from picking up some types of shifts very quickly.

Each month, 1,500 Census Bureau data collectors, or enumerators, set the wheels in motion as they fan out to homes in scientifically selected geographic areas. In just one week, enumerators conduct interviews — either in person or on the telephone — with persons in 60,000 households across the United States.

The data are gathered during the week that includes the 19th of the month, with all questions pertaining to labor market activity occurring during the week that includes the 12th of the month. This mid-month timing generally avoids holidays, Bregger says, thus making it easier to collect data.

Interviewers log many evening hours as they attempt to reach persons who are not home during the day. Nationwide, about half of all married-couple families have both the husband and wife working. About 68 percent of monthly interviews are done over the telephone.

Households rotate in and out of the survey for a period of 16 months. Respondents are in the survey for four months, out for eight months, and then back in for four months. This rotation is done in an effort to "make the sample as current as possible," as well as to prevent the survey from becoming too burdensome on respondents, Bregger says.

During the interview, which takes about 10 or 15 minutes, enumerators ask a household representative a series of questions to determine the labor force experiences of all civilian members of the household who are 16 years and older. Each person described in the survey is later classified according to his or her activities — basically as employed, unemployed, or not in the labor force.

Employed or Unemployed?

To be classified as employed, a person must have worked at least one hour during the week including the 12th of the month. This includes those on strike, locked out, or temporarily laid off — anyone who expects to return to his or her job.

To be counted among the unemployed, a person must meet three criteria: has not worked in the refer-

Table 1

Characteristics of Payroll and Current Population Surveys

Payroll Survey

- Target Group — Establishments (360,000 units)
- Object of Measurement — Employment (non-farm wage and salary jobs), Hours and Earnings (levels, change)
- Measured by — Detailed Industry (two-, three-, and four-digit SIC code)[1]
- Type of Indicator — Economic
- Area Covered; Frequency — National, States and District of Columbia, and 270 Metropolitan Areas; Monthly
- Collection Agent — States and District of Columbia
- Collection Mode — Principally by Mail Shuttle

Current Population Survey

- Target Group — Households (60,000 units)
- Object of Measurement — Labor Force, Unemployment, Employment (levels, change)
- Measured by — Demographics (Age, Sex, Race)
- Type of Indicator — Social and Economic
- Area Covered; Frequency — National, 11 States, 2 Metropolitan Areas; Monthly
- Collection Agent — Census Bureau
- Collection Mode — Personal Visit or Telephone

Note:

1. SIC = Standard Industrial Classification code, as established by *Standard Industrial Classification Manual*, 1987

Source: The Bureau of National Affairs, Inc. May 1991

ence week, is currently available for work, and has looked actively for work in the prior four weeks. All others — including those considered discouraged workers because they are not seeking work — are classified as not in the labor force for purposes of BLS' count.

After years of study, the bureau is currently testing new questions for the household survey, which has been the same since the mid-1960s when family and labor market dynamics were quite different from today. The revised questionnaire — scheduled to be introduced in January 1994 — will include a series of questions designed to get a better handle on the discouraged worker question. This politically sensitive issue becomes particularly important during economic hard times with some analysts arguing that discouraged workers — currently about 1.1. million — should be counted among the unemployed.

Once Census enumerators have their interviews completed, they send data to regional offices. Reports for all households are sent to the Census Bureau facility in Jeffersonville, Ind., where they are coded for industries and occupations. Finally, the data are transmitted by wire to U.S. Census headquarters in Suitland, Md., for processing before they are turned over to BLS.

Users Offer Views, Criticisms

As widely used data series, the employment surveys are not without their critics. To a large extent, criticisms reflect the styles or inclinations of the private forecasters and money market analysts who use the data. Some are bothered by revisions; others recognize them as part of virtually all data programs.

Economist Joel Popkin says he "perceives" that there have been larger and more frequent revisions in the payroll data over the last two years (1990 and 1991). Popkin suggests that BLS consider a smaller sample survey of establishments, perhaps along the lines of the employment cost index program.

Economist Wyss says that "the revisions are getting worse for a number of reasons," including budget cuts at BLS during the 1980s. He also cites compliance problems that the agency may be having. "Putting out a survey is not a high priority for executives in many firms.

Wyss also notes that, like other federal data series, the payroll employment program has not caught up with the growth in services industries, which now account for three out of four jobs in the non-farm private sector.

Other analysts are less critical of revisions. "I tend not to rely on monthly data. ... I rely more on anecdotal evidence," says Lawrence Chimerine, president of Radnor Consulting Group, Wayne, Pa. "I think you have to be careful about overanalysis of the data," he adds.

"Revisions are a fact of life," says Reiners, who is not sure if revisions are greater or if analysts just focus on them more than they did before.

BLS Responds to Critics

For their part, BLS officials concede that there have been times when revisions in payroll employment have been larger than they anticipated. "We have trouble whenever the revision in total payroll employment is larger than 100,000," in a given month, concedes Werking. Most of the problems came in 1990 when the agency had a hard time keeping track of census workers hired for the decennial count, Werking explains.

Early in 1991, when analysts were trying to gauge the depth of the recession, there was a notably large revision in payroll employment that altered the general view of the slowdown. The first estimate showed non-farm payrolls declining by 185,000 in February 1991, but when the revised data were released they showed a drop of 250,000. Most of the revision was in retail trade and services, where a few major firms apparently did not submit their data by the "first closing."

Overall, the bureau's biggest problem is not a lack of response from firms, but the difficulty in eliciting a timely response, Werking says. For the last eight years, BLS has experimented with various ways to improve timeliness so that a larger proportion of firms are covered in the "first closing." Use of high-tech, data-gathering methods has improved response time, he says. But as of May 1991, about only 10,000 out of 360,000 firms in the survey used either touchtone telephone or voice data entry systems each month.

While recognizing the problems that revisions cause forecasters, Werking argues that sometimes the agency is "held to a level that is a little unrealistic." He points out that each year BLS verifies its count and releases a benchmark revision that justifies figures with the universe of UI system reports filed with states.

Some private forecasters concede that there is considerable pressure for them to read more into the data than perhaps they should. "Sometimes we are trying to get information out of the data that isn't there. We're looking at it upside down and every which way to get at it. We're really squeezing a stone," says Ratajczak.

Financial market analysts get pressure from all sides — traders and brokers in their own firms, as well as the press — says Reiners. She joins other analysts in encouraging BLS to do what it can to trim revisions, but underscores that the timely release of data often sacrifices a degree of accuracy.

— Pam Ginsbach,
Staff Editor,
"Daily Report for Executives"

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Sample Size Plays Role in State's Results

Current Employment Statistics (CES) and Local Area Unemployment Statistics (LAUS) are two federal/state cooperative programs that provide crucial, early indicators of Arizona's economic directions. Both public and private policymakers watch these statistics closely.

In Arizona, the CES program counts the number of non-farm payroll jobs each month for the state and its 15 counties. LAUS (pronounced louse) measures the state's total employment and unemployment rate, and from these statistics the total number of unemployed and the seasonally adjusted unemployment rates for the state and its 15 counties are calculated.

Arizona's CES Program

In Arizona, the CES program estimates wage and salary employment based on a sample of approximately 4,000 employers with 6,000 establishments, covering well over one-third of the statewide payroll employment. The sample is stratified by industry, size, and area to be representative of employment throughout the state.

Most of the data are collected directly from employers through a mail survey; the remainder come in by telephone, electronic mail from regional offices of the U.S. Department of Labor's Bureau of Labor Statistics (BLS), and reports mailed from other states.

Nationally, CES data, which measure employment for the pay period that includes the 12th of each month, are normally released on the first Friday of the following month. For example, August 1992 CES data for the nation as a whole will be available September 4. However, Arizona publishes its data 10 days to two weeks later. For instance, August 1992 CES data will be published September 18.

At the national level, BLS publishes data on 54 major industry and subindustry categories. In Arizona, DES, Research Administration publishes data on 33 major industry and subindustry categories at the statewide level; 27 major and subindustry groups in Maricopa County; 22 major and subindustry groups in Pima County; and the nine major industry categories in the 13 non-metropolitan counties. More detailed industry information is published in larger geographic areas (e.g., U.S., Arizona) because of the strict statistical reliability criteria BLS demands, meaning the need for a large enough sample.

Arizona's LAUS Program

The LAUS program measures total employment and the unadjusted employment rate for the nation as a whole and the 11 most populous states from data gathered from the Current Population Survey (CPS), which surveys about 60,000 households nationally (see "Job Surveys," front page).

But in Arizona and the 39 least-populated states, also known as non-direct-use states, the CPS sample is too small to be statistically reliable. (The CPS samples about 620 households in Arizona.) Therefore, to limit potential wild month-to-month swings in these data, for non-direct-use states BLS has developed mathematical equations that combine CPS data with other variables.

In Arizona, the total employment model includes payroll employment data from the CES program, plus estimates of the number of agricultural workers, the self-employed, domestic workers, and unpaid family workers. Meanwhile, the unemployment rate is calculated from an equation that includes unemployment claims, the CPS employment estimate, and the number of new entrants into the labor force. In June of each year, a fourth factor is added to account for students entering the job market.

BLS Upgrading Programs in Wide Number of Areas

Since 1947, the state of Arizona, in cooperation with the U.S. Department of Labor's Bureau of Statistics (BLS), has produced monthly statewide employment and unemployment statistics. And more recently, what is now the Department of Economic Security's Research Administration (RA) generates not only monthly unemployment and employment data for each county and the state's major metropolitan areas, but also provides a wide range of occupational and population statistics.

These data are used by public and private entities for a number of applications — from developing tax revenue and economic forecasts to measuring employers' efforts at creating equal employment opportunities for minorities. And the frequency of usage is just as broad. Some users track the data month-to-month, while others only need annual or decennial data.

Many people view statistical systems as dry, unchanging, number-crunching operations. But the truth is far different. Currently, there are about 30 different BLS initiatives under way to keep data-collection programs up-to-date with the needs of users, the changing economic environment, and the availability of new technology.

Following are highlights of some of these efforts, with a more complete list of initiatives shown in Table 1.

Redesigning Current Population Survey — With data from the 1990 census now available, the monthly Current Population Survey (CPS) — used in determining state and county employment and

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These two equations, known as the variable-coefficient models, have been used for the past three years. They are more accurate than a building-block method that had been in place since the 1960s. The building-block method, however, is still used to determine total employment and the unemployment rates in the state's 15 counties. This is done by disaggregating, or proportionally dividing, the state totals to the 15 counties.

The building-block procedure, now known as the state system program (SSP), contains 43 steps and includes many of the variables used in the employment and unemployment rate models, plus a number of other variables.

After the county statistics have been calculated, total employment and unemployment rate figures are further disaggregated to produce data for more than 100 Arizona cities, towns, and unincorporated areas. Calculations are made based on these areas' share of their county total employment and unemployment rate estimates in the most recent census. The results are then published in Research Administration's monthly "Special Unemployment Report."

CES Revisions

Because CES data are released to the public within a short time period of first being collected — three weeks, nationally, and five weeks in Arizona — they are subject to monthly revisions. Part of this is due to the amount of detailed information that is rapidly prepared and subject to estimating error, and part is due to receiving only a percentage of employer surveys before monthly publishing deadlines.

Regarding the latter, only 50 to 65 percent of Arizona's surveys are normally received in time for the CES unit's initial deadline, known as first closing. Data from these surveys are then used to produce preliminary CES estimates, which are published in the state's monthly press release, *Arizona's Workforce*.

Preliminary CES figures are revised twice at the national level and once in Arizona. For example, national CES data for August 1992 will be released on September 4 and subsequently revised October 2 and November 6, while Arizona's CES estimate for August will be released September 18 and revised October 20.

BLS is continually working to reduce the size of CES revisions by instituting several projects on a national and state level.

Currently, BLS' "Large Reporter Project" is seeking to improve the percentage of on-time surveys from large employers. Statistical studies have clearly demonstrated that the accuracy of preliminary estimates can be improved if data from more large employers are available by first closing.

A major part of this project are two BLS programs being implemented to speed data collection. CATI (computer-assisted telephone interview) allows collection of data by telephone using specially programmed computers and trained operators. And TDE (touchtone data entry) further speeds data collection by allowing employers to directly input their data over telephone lines with a touchtone telephone.

Both of these programs are being evaluated in a growing number of states, but it is not currently known when Arizona will receive equipment and training for either of these programs. In the meantime, however, Arizona is working to reduce its CES revisions in two ways.

First, since the CES survey in Arizona and in most other states is voluntary, new reporters continually have to be recruited to replace firms that have gone out of business, changed ownership, or simply refuse to continue to supply monthly data. Responding to this need, Arizona's CES Unit has significantly expanded the size of its sample through intensive recruitment. The state's CES sample now includes more than 600,000 of Arizona's 1.5 million wage and salary workers.

In addition, the CES unit is stratifying its sample by geographic area and size class so it will be more representative of the industry and geographic area it is measuring. Statistical studies have demonstrated that this should significantly increase the accuracy of the CES estimates.

A second area where Arizona expects to limit the size of its CES revisions is by changing how the statewide and small-county (all but Maricopa and Pima) estimates are calculated. Because of limitations in computer software, the statewide CES estimates are currently measured by simply adding up wage and salary jobs for 48 industries in all 15 counties. But this methodology presents two major problems.

One, in many of the counties employment in certain industries (e.g., copper mining) are too small to be accurately estimated. In these cases, projections have been made based on historical trends. During stable economic times this procedure is adequate, but in economic recessions or expansions estimating this way may miss turning points that are crucial to the accurate analysis of CES data.

Another problem with the current CES estimating methodology is its lack of flexibility. By having to estimate wage and salary employment in 48 industries in all 15 counties, it wastes analysts' valuable time every month and does not add to the accuracy of the statewide estimate. At the same time, calculating more detailed information about the state and metropolitan counties is currently not possible because the software is limited to estimating 48 industries.

Arizona's CES unit is exploring new software to make the estimating methodology more reflective of the employment patterns of the state and individual counties. If this research is successful, a number of additional industries will be estimated and publish-

Table 1

Percentage Change Between Original Estimate and Benchmark Revision of Non-farm Wage and Salary Employment, in Selected States, 1985-1991[1]

State	1985	1986	1987	1988	1989	1990	1991	'91 Rank
Deleware	0.1%	0.0%	-0.4%	-0.8%	0.7%	-0.1%	0.0%	1 (tie)
Michigan	1.7	1.7	0.9	1.2	0.0	1.5	0.0	1 (tie)
Wisconsin	-0.7	0.1	1.0	0.2	1.0	0.4	-0.1	3
New Mexico	0.6	0.5	-1.1	0.1	1.4	1.1	0.2	4
Utah	-0.3	-0.4	-0.5	0.4	0.7	-0.1	-0.3	5 (tie)
Montana	-1.1	-1.8	1.0	1.2	-0.6	-0.6	-0.3	5 (tie)
Minnesota	-0.8	-0.4	0.8	0.4	0.4	-0.4	0.3	5 (tie)
Iowa	0.5	-1.2	-0.7	0.2	0.2	-0.3	-0.3	5 (tie)
Alabama	1.6	1.4	0.5	1.5	1.1	1.9	-0.3	5 (tie)
Arizona	0.5	-0.1	0.0	-0.1	1.6	-1.1	-1.3	30 (tie)
Nevada	-1.2	0.6	-0.3	0.9	0.6	-0.3	-1.3	30 (tie)
California	0.6	0.1	0.0	-0.2	1.0	0.7	-2.6	47

Note:

1. Benchmarked through March of year shown

Source: U.S. Department of Labor, Bureau of Labor Statistics, 1986-1992

ed for the state, Maricopa County, and Pima County, possibly as soon as May 1993. Statewide, between 55 and 60 industries will be estimated, while Maricopa County will have between 50 and 55 estimating cells and Pima County, around 50. However, the non-metropolitan counties will continue to have payroll employment figures for only nine major industry groups, although more detailed estimates in some counties may be possible at a later data.

CES Benchmarking

In addition to monthly revisions, state CES estimates are checked for accuracy each March through a process called "benchmarking."

Benchmarking balances CES' estimates to payroll employment totals produced from unemployment insurance (UI) records, which account for about 98 percent of wage and salary employment in the country. This process results in an accurate count of employment, as well as provides a baseline from which monthly CES estimates measure the direction and magnitude of change.

For the most recent benchmark, the period ending March 1991, Arizona's CES wage and salary estimates were revised downward by 1.3 percent, or 19,800 jobs.[1] This divergence was larger than usual, but as Table 1 shows, results from the 1991 benchmark period (April 1990 through March 1991) were not good for many states.

On a national level, part of the problem in 1991 was as undetected downturn of employment between December 1990 and January 1991, particularly in several large states, such as New York and California. An undercount of layoffs in small and newly formed companies — up to 2 million in the first quarter of 1991 — likely contributed to large revisions last March.2

And in Arizona, the significant 1991 revision was also due to the small size of CES' sample and the inflexibility of its estimating methodology. It is expected that improvements outlined above will likely prevent such a large error from occurring in the future.

(continued on back page)

Table 1

Current and Planned Bureau of Labor Statistics and Research Administration Projects

- ✔ Redesign Current Population Survey (CPS)
- ✔ Modernize CPS System and Provide More Micro-Data to States
- ✔ Improve Accuracy of Preliminary Current Employment Statistics (CES) Data
- ✔ Produce Seasonally Adjusted CES and CPS data
- ✔ Expand Reporting of Service Sector in CES Program
- ✔ Move All States to CPS Direct-Use
- ✔ Enhance Local Area Unemployment Statistics (LAUS) Program Methodology
- ✔ Analyze Decennial Census and CPS Data
- ✔ Develop Exportable Mass Layoff Statistic (MLS) System
- ✔ Collect Wage Data in Occupational Employment Statistics (OES) Survey
- ✔ Refine Business Establishment List (BEL) Program
- ✔ Modernize Processing Systems
- ✔ Estimate Hours and Earnings for All Workers
- ✔ Analyze Special Labor Market Issues (e.g., military downsizing effect on manufacturing sectors)
- ✔ Improve Accuracy of Affirmative-Action Data
- ✔ Track Data in Disadvantaged Areas
- ✔ Better Understand Impact of Foreign Direct Investment
- ✔ Better Understand Job-Creation Process
- ✔ Better Understand Impact of Business Formation
- ✔ Publish Data on Employee Turnover and Job Openings
- ✔ Measure Quality of Employer Data

BLS Upgrading Programs in Number of Areas

(continued from page 5)
unemployment totals — needs to be updated to reflect changing statewide demographics. Of critical importance to Arizona is improving CPS' accuracy. This can be done in a number of ways: one obvious possibility is increasing the size of the sample (currently 620 households in this state; another consideration would be to change the distribution of sampled households across the state.

Improving Accuracy of Industry Employment Estimates — Monthly employment-by-industry figures, provided by the Current Employment Survey (CES), are regarded as the first and best measure of economic health — both nationally and locally. With interest rates and stock market changes sensitive to these numbers, accuracy is a critical issue. A related article on this page and an item directly below touch on several ways to improve the accuracy of the nation's and Arizona's CES data.

Expanding Release of Service-Sector Data — Service-producing sectors account for 83 percent of Arizona's non-farm wage and salary employment, but only a little more than half (17 of 32) of the industry groups reported in the state's CES program. Obviously, the sectoral detail in reporting payroll employment in the service sectors does not match its reporting detail. To increase service-sector detail will require an increase in federal or state funding, or at least approval from BLS to shift resources currently dedicated to sampling firms in goods-producing industries.

Refining Business Establishment List (BEL) — Until recently, BLS' ES-202 program, which uses unemployment insurance records to publish a variety of employment data, only coded employers' locations at the county level. However, many requests for ES-202 data were at the city or sub-city level. BLS and each state are currently working on a multi-year effort to identify the physical location of all employers — those with single and multiple locations. This will allow a more accurate picture of local employment in counties such as Maricopa, where there are number of municipalities and unincoporated areas.

Modernize Processing Systems — Much of RA's data processing occurs on mainframe computers. But recent personal computer technology provides the opportunity to migrate these systems to a platform that is more suitable for RA's purposes and will save time and money. RA currently spends large amounts of money on customized systems that do not take advantage of these personal computer software packages.

Improving Affirmative-Action Data — Employers who are analyzing minority and female composition of their workforce, relative to the overall workforce, have found current affirmative-action data to be of limited value. In terms of timeliness and accuracy, alternatives to using census reports to produce this data need to be explored. One possibility is using the yearly average of CPS data to update census data; another proposal is expanding the Occupational Employment Statistics (OES) survey to obtain race and sex data by occupation.

Data on Employee Turnover and Job Openings — In the 1970s, RA conducted employer surveys that measured jobs employers were trying to fill and the stability of their workforce. Unfortunately, funding levels were reduced and those surveys were dropped. A number of users, such as employment and training professionals, have asked that these suveys be restored. But before the surveys can begin, significant developmental work in terms of definitions, process, and products needs to be undertaken. Two states have already tested the concept.

—Dan Anderson
Research Administrator

Unemployment Up, But Rate Down in June

Arizona's economy failed to demonstrate improvement in June as unemployment continued climbing after shrinking during the previous two months. While unemployment was up 14,900, this was slightly less than seasonally expected and, coupled with an increase in total employment of 15,900, led to the unemployment rate moving down one-tenth of a percentage point to 7.1 percent.

ARIZONA'S WORKFORCE

Unemployment rates in Maricopa, Pima, and the rural counties, for the most part, maintained their positions relative to one another. Overall, eight counties had jobless rates in June that were lower than in May, while six counties had higher rates.

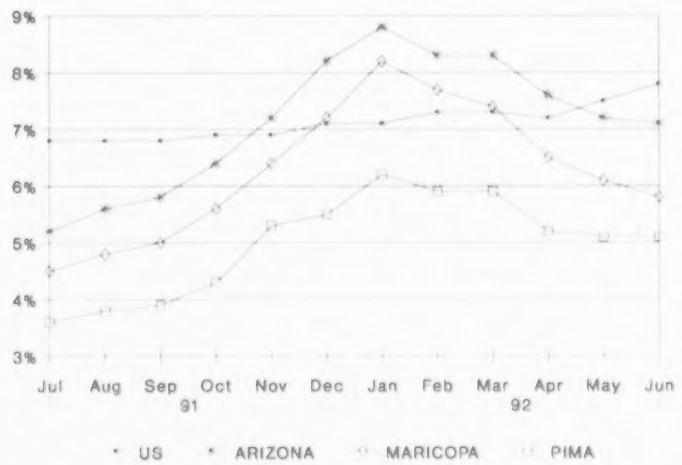
Maricopa County's seasonally adjusted rate dropped 0.3 percentage points to 5.8 percent; Pima County's rate held at 5.1 percent, but remained the lowest in Arizona; and rural county unemployment rates ranged from 7.3 percent in Yavapai County to 22.6 percent in Yuma County.

The end of the school year always brings a rise in unemployment as youth and school staff enter the labor market. In addition, school employment declines take government employment down significantly. This June, government employment dropped 31,400, a seasonal 11 percent decline and all but 1,000 of Arizona's payroll job losses of 32,400 for the month.

There was little in June's employment change to promote optimism about Arizona's economy. While Arizona's loss of payroll jobs was only 1,000 more than seasonally normal, June marked the first month since January 1983 that Arizona has posted an over-the-year loss in wage and salary jobs (down 1,400 from June 1991).

Figure 1

U.S., Arizona, Maricopa County, and Pima County Unemployment Rates (Seasonally Adjusted), July 1991-June 1992



Source: Arizona Dept. of Economic Security, Research Administration, July 1992

Retail trade looked the most bleak among industry losers as another 2,500 retail jobs disappeared in June. After six straight monthly losses, retail trade was down 1,200 jobs from June 1991, and the industry has posted over-the-year losses since March, the first month of annual decline since February 1983.

Retail trade sectors that lost the most employment in June were food stores (800) and eating and drinking places (1,500).

Manufacturing Continues Slide

Arizona lost another 100 manufacturing jobs in June with 22,400 having been lost since manufacturing employment peaked at 190,700 in September 1988. Aircraft and missiles manufacturers dropped another 500. Their employment peaked at 28,000 in July 1990 and has dropped to its current level of 21,900.

The only good news of significance in the June employment statistics was that construction gained 1,700 more jobs, principally in the residential construction sector. Arizona construction was up 3,500 from a year ago to a level of 81,700 jobs. June marked the fourth consecutive month with over-the-year construction gains, an event not experienced in Arizona since 1986.

A surprise came in the transportation industry in June. Despite all the publicity of airline companies suffering financially from price wars, Arizona gained 200 jobs. This was the first transportation gain in six months. Nevertheless, the transportation industry was still down 2,200 jobs from a year ago.

Overall, June's employment statistics gave mixed signals, but the stronger signals were for continuing weakness in the months ahead. The unemployment rate dropped for the third consecutive month; payroll jobs declined for the second straight month; manufacturing employment continued downward, especially in the defense-related components; retail trade continued downward for the sixth consecutive month; and construction continued growing. But unless the nation's economy takes a dip sometime in the last two quarters of the year, Arizona job declines may soon reach their trough. AET

—Ron Simon,
RA Economic Analysis Manager

Table 1
Arizona Labor Force, Employment, and Unemployment Data, June 1992[a]

(In Thousands)

	Jun. 1992[b]	May 1992[c]	Jun. 1991	Monthly/Yearly Change: May '92 - Jun. '92	Monthly/Yearly Change: Jun. '91 - Jun. '92
Total Civilian Labor Force[d]	1747.0	1716.2	1715.9	30.8	31.1
Total Unemployment	135.3	120.4	96.5	14.9	38.8
Unemployment Rate	7.7%	7.0%	5.6%	—	—
Unemployment Rate (Seasonally Adjusted)[e]	7.1%	7.2%	5.1%	—	—
Total Employment	1611.7	1595.8	1619.4	15.9	-7.7
Total Wage and Salary Employment[f, g]	1476.3	1508.7	1477.7	-32.4	-1.4
Private Sector	1222.2	1223.2	1224.4	-1.0	-2.2
Government	254.1	285.5	253.3	-31.4	0.8
Goods-Producing Industries	**264.3**	**262.7**	**268.2**	**1.6**	**-3.9**
Manufacturing	**168.3**	**168.4**	**176.4**	**-0.1**	**-8.1**
Total Durable Goods	124.2	124.7	132.5	-0.5	-8.3
Stone, Clay, and Glass	5.2	5.3	5.6	-0.1	-0.4
Primary and Fabricated Metals	13.7	13.6	14.2	0.1	-0.5
Primary Metals	5.6	5.6	5.9	0.0	-0.3
Fabricated Metals	8.1	8.0	8.3	0.1	-0.2
Machinery	52.4	52.9	55.0	-0.5	-2.6
Aircraft and Missiles	21.9	22.4	26.9	-0.5	-5.0
Lumber and Wood Products (Excluding Furniture)	6.8	6.6	6.4	0.2	0.4
Total Non-durable Goods	44.1	43.7	43.9	0.4	0.2
Food and Kindred Products	10.2	10.1	9.6	0.1	0.6
Printing and Publishing	15.6	15.6	15.8	0.0	-0.2
Mining and Quarrying	**14.3**	**14.3**	**13.6**	**0.0**	**0.7**
Copper Mining	12.0	12.0	11.1	0.0	0.9
Construction	**81.7**	**80.0**	**78.2**	**1.7**	**3.5**
Service-Producing Industries	**1212.0**	**1246.0**	**1209.5**	**-34.0**	**2.5**
Transportation, Communications, and Public Utilities	**79.2**	**79.0**	**81.4**	**0.2**	**-2.2**
Transportation	45.2	45.0	47.2	0.2	-2.0
Communications and Public Utilities	34.0	34.0	34.2	0.0	-0.2
Trade	**369.4**	**372.3**	**371.0**	**-2.9**	**-1.6**
Total Wholesale Trade	74.4	74.8	74.8	-0.4	-0.4
Total Retail Trade	295.0	297.5	296.2	-2.5	-1.2
General Merchandise and Apparel	49.1	49.4	47.9	-0.3	1.2
Food Stores	49.1	49.9	50.4	-0.8	-1.3
Automotive and Service Stations	34.7	34.7	34.2	0.0	0.5
Eating and Drinking Places	103.9	105.4	105.1	-1.5	-1.2
Finance, Insurance, and Real Estate	**92.0**	**91.9**	**93.2**	**0.1**	**-1.2**
Services and Miscellaneous	**417.3**	**417.3**	**410.6**	**0.0**	**6.7**
Hotels and Lodging Places	39.0	40.2	39.9	-1.2	-0.9
Business Services	87.3	87.2	84.2	0.1	3.1
Health Services	109.0	108.4	104.6	0.6	4.4
Government	**254.1**	**285.5**	**253.3**	**-31.4**	**0.8**
Federal	44.3	45.8	45.2	-1.5	-0.9

Notes and Source: See Table 3

Table 2

Maricopa County Labor Force, Employment, and Unemployment Data, June 1992[a]

(In Thousands)

	Jun. 1992[b]	May 1992[c]	Jun. 1991	Monthly/Yearly Change: May '92 - Jun. '92	Monthly/Yearly Change: Jun. '91 - Jun. '92
Total Civilian Labor Force[d]	1071.8	1050.3	1076.8	21.5	-5.0
Total Unemployment	68.1	62.6	51.5	5.5	16.6
Unemployment Rate	6.4%	6.0%	4.8%	—	—
Unemployment Rate (Seasonally Adjusted)[e]	5.8%	6.1%	4.4%	—	—
Total Employment	1003.7	987.7	1025.3	16.0	-21.6
Total Wage and Salary Employment[f, g]	968.5	982.6	973.8	-14.1	-5.3
Private Sector	740.3	758.6	755.6	-18.3	-15.3
Government	135.2	147.2	132.9	-12.0	2.3
Goods-Producing Industries	399.4	402.5	413.5	-3.1	-14.1
Manufacturing	125.4	125.5	132.0	-0.1	-6.6
Total Durable Goods	94.0	94.5	100.6	-0.5	-6.6
Stone, Clay, and Glass	2.8	3.0	3.2	-0.2	-0.4
Primary and Fabricated Metals	9.4	9.3	9.8	0.1	-0.4
Machinery	43.6	43.9	45.7	-0.3	-2.1
Total Non-durable Goods	31.4	31.0	31.4	0.4	0.0
Food and Kindred Products	7.3	7.2	7.0	0.1	0.3
Printing and Publishing	10.9	11.0	11.1	-0.1	-0.2
Mining and Quarrying	0.8	0.8	0.8	0.0	0.0
Construction	54.2	53.0	50.9	1.2	3.3
Service-Producing Industries	788.1	803.3	790.1	-15.2	-2.0
Transportation, Communications, and Public Utilities	55.4	55.1	57.9	0.3	-2.5
Transportation	33.1	32.9	35.4	0.2	-2.3
Communications and Public Utilities	22.3	22.2	22.5	0.1	-0.2
Trade	240.9	244.1	246.1	-3.2	-5.2
Total Wholesale Trade	56.5	56.6	58.0	-0.1	-1.5
Total Retail Trade	184.4	187.5	188.1	-3.1	-3.7
General Merchandise and Apparel	31.0	31.2	30.6	-0.2	0.4
Food Stores	30.5	31.6	32.2	-1.1	-1.7
Automotive and Service Stations	21.3	21.4	21.1	-0.1	0.2
Eating and Drinking Places	65.7	67.2	67.2	-1.5	-1.5
Finance, Insurance, and Real Estate	73.3	73.3	74.1	0.0	-0.8
Services and Miscellaneous	283.3	283.6	279.1	-0.3	4.2
Hotels and Lodging Places	23.2	24.0	23.3	-0.8	-0.1
Business Services	70.7	70.6	68.5	0.1	2.2
Health Services	70.6	70.3	67.7	0.3	2.9
Government	135.2	147.2	132.9	-12.0	2.3

Notes and Source: See Table 3

Table 3
Pima County Labor Force, Employment, and Unemployment Data, June 1992[a]

(In Thousands)

	Jun. 1992[b]	May 1992[c]	Jun. 1991	Monthly/Yearly Change: May '92 - Jun. '92	Monthly/Yearly Change: Jun. '91 - Jun. '92
Total Civilian Labor Force[d]	322.6	322.7	304.5	-0.1	18.1
Total Unemployment	17.3	15.4	11.3	1.9	6.0
Unemployment Rate	5.4%	4.8%	3.7%	—	—
Unemployment Rate (Seasonally Adjusted)[e]	5.1%	5.1%	3.5%	—	—
Total Employment	305.3	307.3	293.2	-2.0	12.1
Total Wage and Salary Employment[f, g]	257.4	268.1	252.5	-10.7	4.9
Private Sector	203.5	203.5	199.0	0.0	4.5
Government	53.9	64.6	53.5	-10.7	0.4
Goods-Producing Industries	41.4	41.3	41.7	0.1	-0.3
Manufacturing	24.0	24.0	25.0	0.0	-1.0
Total Durable Goods	18.6	18.6	19.9	0.0	-1.3
Total Non-durable Goods	5.4	5.4	5.1	0.0	0.3
Mining and Quarrying	2.3	2.3	2.3	0.0	0.0
Construction	15.1	15.0	14.4	0.1	0.7
Service-Producing Industries	216.0	226.8	210.8	-10.8	5.2
Transportation, Communications, and Public Utilities	10.6	10.6	9.9	0.0	0.7
Transportation	6.0	6.0	5.5	0.0	0.5
Communications and Public Utilities	4.6	4.6	4.4	0.0	0.2
Trade	62.9	63.0	60.7	-0.1	2.2
Total Wholesale Trade	9.3	9.3	8.8	0.0	0.5
Total Retail Trade	53.6	53.7	51.9	-0.1	1.7
General Merchandise and Apparel	7.8	8.0	7.7	-0.2	0.1
Food Stores	8.2	8.2	8.1	0.0	0.1
Automotive and Service Stations	5.7	5.7	5.5	0.0	0.2
Eating and Drinking Places	19.1	19.3	18.5	-0.2	0.6
Finance, Insurance, and Real Estate	11.7	11.7	11.8	0.0	-0.1
Services and Miscellaneous	76.9	76.9	74.9	0.0	2.0
Hotels and Lodging Places	6.5	6.8	6.4	-0.3	0.1
Business Services	12.5	12.4	11.6	0.1	0.9
Health Services	23.1	23.1	22.5	0.0	0.6
Government	53.9	64.6	53.5	-10.7	0.4

Notes: a) Data on labor force, total unemployment, total employment, and seasonally adjusted unemployment rate should not be used for economic-assistance programs. Data for economic-assistance programs are available by contacting DES, Research Administration
b) Preliminary and subject to revision following month
c) Revised
d) Adjusted to Current Population Survey (CPS) to reflect place of residence
e) Normal seasonal variations have been eliminated to reflect underlying trends
f) By place of work; does not include agricultural workers, self-employed, unpaid family members, and domestic workers
g) Detail may not add up correctly due to rounding
h) Rounded to the nearest one-quarter

Source: *Prepared by the Arizona Dept. of Economic Security, Research Administration, in cooperation with the U.S. Dept. of Labor, Bureau of Labor Statistics, July 1992*

Table 4
Non-metropolitan Counties' Labor Force, Employment, and Unemployment Data, June 1992[a,b]

	Apache	Cochise	Coconino	Gila	Graham	Greenlee	La Paz
Total Civilian Labor Force[d]	14,525	37,660	44,950	14,400	8,075	3,550	7,400
Total Unemployment	3,025	3,325	4,500	1,800	875	400	700
Unemployment Rate	20.8%	8.8%	10.0%	12.5%	10.9%	11.1%	9.6%
Unemployment Rate (Seasonally Adjusted)[e]	16.5%	8.2%	8.4%	12.4%	10.9%	11.1%	10.3%
Total Employment	11,500	34,325	40,450	12,600	7,200	3,150	6,700
Total Wage and Salary Employment[f,h]	14,000	26,400	40,825	12,100	4,700	3,325	3,400
Private Sector	9,500	15,600	29,700	9,150	3,075	2,850	2,525
Government	4,500	10,800	11,125	2,950	1,625	475	875
Goods-Producing Industries	775	2,250	4,850	3,375	400	2,300	575
Manufacturing	475	1,125	3,200	1,425	200	25	250
Mining and Quarrying	25	125	125	1,200	0	2,025	50
Construction	275	1,000	1,525	750	200	250	275
Service-Producing Industries	13,225	24,150	35,975	8,725	4,300	1,025	2,825
Transportation, Communications, and Public Utilities	1,650	1,525	2,475	450	150	50	150
Trade	1,750	5,850	10,700	2,675	1,500	325	1,200
Finance, Insurance, and Real Estate	400	625	775	225	125	25	125
Services and Miscellaneous	4,925	5,350	10,900	2,425	900	150	475
Government	4,500	10,800	11,125	2,950	1,625	475	875

	Mohave	Navajo	Pinal	Santa Cruz	Yavapai	Yuma
Total Civilian Labor Force[d]	40,325	26,950	39,900	12,425	42,625	59,650
Total Unemployment	3,725	4,250	4,575	2,125	3,075	17,425
Unemployment Rate	9.3%	15.8%	11.5%	17.0%	7.2%	29.2%
Unemployment Rate (Seasonally Adjusted)[e]	9.2%	13.2%	10.3%	14.6%	7.3%	22.6%
Total Employment	36,600	22,700	35,325	10,300	39,550	42,225
Total Wage and Salary Employment[f,h]	27,900	20,175	29,475	11,000	28,725	28,375
Private Sector	22,875	14,900	21,300	9,175	23,625	21,075
Government	5,025	5,275	8,175	1,825	5,100	7,300
Goods-Producing Industries	5,175	3,550	9,225	1,350	5,650	3,000
Manufacturing	2,500	1,625	2,925	1,000	2,525	1,625
Mining and Quarrying	25	1,075	5,525	0	1,000	0
Construction	2,650	850	775	350	2,125	1,375
Service-Producing Industries	22,725	16,625	20,250	9,650	23,075	25,375
Transportation, Communications, and Public Utilities	1,400	1,475	875	700	1,025	1,300
Trade	8,800	4,675	5,625	5,050	8,375	9,050
Finance, Insurance, and Real Estate	1,225	525	525	275	1,000	1,000
Services and Miscellaneous	6,275	4,675	4,950	1,800	7,575	6,725
Government	5,025	5,275	8,175	1,825	5,100	7,300

Notes and Source: See Table 3

Table 5
Estimated Hours and Earnings of Production Workers, by Selected Industry Groups, June 1992[a]

Arizona

Industry	Average Weekly Earnings			Average Weekly Hours			Average Hourly Earnings		
	June 1992[b]	May 1992[c]	June 1991	June 1992[b]	May 1992[c]	June 1991	June 1992[b]	May 1992[c]	June 1991
Manufacturing	$445.50	$447.17	$430.92	40.5	40.8	40.5	$11.00	$10.96	$10.64
Aircraft and Missiles	690.69	659.13	657.30	46.2	44.9	45.3	14.95	14.68	14.51
Food and Kindred Products	367.25	367.93	344.37	37.9	39.1	39.0	9.69	9.41	8.83
Primary Metals	487.60	517.88	494.22	40.0	41.2	39.1	12.19	12.57	12.64
Machinery	453.40	456.96	430.11	40.7	40.8	40.5	11.14	11.20	10.62
Copper Mining	647.96	633.82	649.00	43.9	43.0	44.0	14.76	14.74	14.75
Construction	462.47	464.82	446.75	38.7	38.8	37.7	11.95	11.98	11.85
Public Utilities	787.52	787.95	761.24	43.8	42.5	44.7	17.98	18.54	17.03
Retail Trade[d]	286.71	282.97	273.37	33.3	32.6	32.7	8.61	8.68	8.36
Wholesale Trade	399.65	393.78	409.34	38.2	37.6	38.4	10.47	10.47	10.66

Maricopa County

Industry	Average Weekly Earnings			Average Weekly Hours			Average Hourly Earnings		
	June 1992[b]	May 1992[c]	June 1991	June 1992[b]	May 1992[c]	June 1991	June 1992[b]	May 1992[c]	June 1991
Manufacturing	$471.74	$475.02	455.95	41.6	42.0	41.3	$11.34	$11.31	$11.04
Construction	476.91	476.91	473.10	38.9	38.9	38.0	12.26	12.26	12.45
Retail Trade[d]	300.94	299.13	287.05	33.7	33.2	33.3	8.93	9.01	8.62
Wholesale Trade	400.68	398.63	431.20	37.8	37.5	38.5	10.60	10.63	11.20

Pima County

Industry	Average Weekly Earnings			Average Weekly Hours			Average Hourly Earnings		
	June 1992[b]	May 1992[c]	June 1991	June 1992[b]	May 1992[c]	June 1991	June 1992[b]	May 1992[c]	June 1991
Manufacturing	$403.28	$413.26	$416.56	37.1	38.3	40.6	$10.87	$10.79	$10.26
Construction	409.21	417.38	380.02	37.1	37.5	36.4	11.03	11.13	10.44
Public Utilities	643.81	662.97	659.60	42.3	42.8	42.5	15.22	15.49	15.52

Notes: a) Estimates are based on a sample of full- and part-time production and related workers whose payroll and hours are reported for the pay period that includes the 12th of the month
b) Preliminary and subject to revision following month
c) Revised
d) Excludes eating and drinking places

Source: *Prepared by the Arizona Dept. of Economic Security, Research Administration, in cooperation with the U.S. Dept. of Labor, Bureau of Labor Statistics, July 1992*

Industry Update

"Industry Update" — featured each month as a service to our readers — is a compilation of public announcements and articles from newspapers and periodicals about business events significant to Arizona labor markets. Due to space limitations, however, an exhaustive list of industry news is not feasible. In addition, Arizona Economic Trends is not responsible for incorrect information reported by these sources.

Manufacturing

The Arizona Commerce and Economic Development Commission took off its hat and welcomed a Compton, Calif., headwear company to Arizona with a low-interest loan when **Atlas Headwear Inc.** decided recently to **move its operations to Phoenix**. Atlas expects to **employ 165 people** at a 40,000-square-foot facility it is leasing at 501 N. 37th Drive beginning in September. Among its clients are Walt Disney Productions and the U.S. military.

The recent merger of two food processing and distribution companies is leading to the creation of **30 to 40 jobs in Tempe**. **GB Industries**, which was formed by the merger of Global Enterprises of Sandwich, Ill., and Brimtec of San Diego, was expected to locate several of its operations at Elliot Park 10, 1839 W. Drake Drive by Aug. 1. GB will specialize in making and distributing non-perishable and dehydrated foods.

About **150 Navajos** who live on the reservation have been contracted to work with an Albuquerque company, American Indian Designer Collection, to **produce beadwork for a new line of Reebok tennis shoes**. Reebok plans to produce about 700,000 beaded shoes initially with a selling price between $125 and $400.

A $50 million investment by computer-chip maker Intel Corp. of Santa Clara, Calif., may yield **several hundred jobs** for the Tempe operations of **VLSI Technology Inc.** of San Jose. VLSI, which currently employs about 300 people at its Tempe operation, will use Intel's technology to make computer chips for hand-held computers, an emerging growth area for the high-tech industry. Intel's Arizona operations are not expected to directly gain jobs through the joint venture, which allows Intel to buy a 20 percent stake in VLSI.

Transportation, Communications, and Public Utilities

America West Airlines announced in late July it would **cut 1,500 positions** and get rid of 15 aircraft by September. The cost-cutting move was expected to save the Phoenix-based airline $7 million a month and give it a fighting chance to remain afloat. American West, which will still have about 10,500 employees nationwide after the cuts, filed for bankruptcy protection in June 1991 and hopes through these cuts and additional financing it can establish a basis for filing a reorganization plan.

Australian-owned **Qantas Airways Ltd.** is **moving its U.S. reservation center from San Francisco to Tucson**, bringing with it about 100 to 120 jobs. The reservation facility is expected to open by the end of October, but little details have been given about potential worker salaries. Qantas is the second major airline to open a reservations center in Tucson, following the lead of American Airlines in 1991.

Slack business caused **Lockheed Aeromod Center** in Tucson to **lay off about one-third of its workforce**, or 125 employees, in early July. The cuts at the aircraft-maintenance center, however, may only be temporary as work tends to pick up in the fall.

Trade

Work began in late July on a **$10 million shopping complex in San Luis, Ariz.**, expected to bring up to **400 jobs** to the border town near Yuma when completed in about two years. San Luis Plaza will include a Mega Foods grocery store and an 87-store retail shopping area called Price Center. The latter is expected to open in the first half of 1993. CDB Construction is building the 27-acre project.

Kmart and Target stores will **anchor a proposed 300,000-square-foot retail center** at the northeastern corner of Superstition Freeway and Power Road in Mesa, it was announced in mid-July. The 32-acre site, which is part of the Superstition Springs master-planned community, will also include one or two other major stores. No timetable for construction has been given.

The **Bashas'** grocery chain has started construction on a **$4.3 million, 310,000-square-foot warehouse** and distribution facility in Chandler to service its 56 stores throughout the state. Currently, Bashas' has several warehouses its leases, and the company expects to save money by eventually consolidating its operations in the new facility.

Services

PCS Inc. of Scottsdale expects to **hire 200 claims processors** beginning in October thanks to winning a three-year federal contract. PCS, which currently employs about 800 people, will handle benefit claims for prescription drugs dispensed under the Blue Cross and Blue Shield Federal Employee Program, which covers about 3.1 million workers. PCS business is expected to increase about 15 percent.

The **Days Inn motel chain opened a reservations center in Phoenix** in mid-July, which is initially expected to employ about 160 people. The facility, located in the former headquarters of Ramada Inc., 3838 E. Van Buren St., will also handle group sales and customer-service functions, which were moved from Days Inn's home base in Knoxville, Tenn. Days Inn currently has about 1,300 franchised motels and anticipates as many as 2,000 by 1995.

Service Express, a Scottsdale-based, commercial-cleaning service that primarily services hotels is **expanding into the Tucson market** and expects to **hire about 25 workers** by the end of September. Positions range from entry-level cleaners to managers. AET

Sample Size Plays Role in State's Results

(continued from page 7)

LAUS Revisions

LAUS estimates for total employment and the unemployment rate are also revised the following month and benchmarked annually. Monthly figures are recalculated using more complete CES, agricultural, and UI employment data. Similarly, benchmarked LAUS calculations include final figures for those variables.

Currently, BLS is implementing a number of changes for Arizona that should improve the accuracy of LAUS statistics.

First, separate mathematical equations for total employment and the unemployment rate are being developed for Maricopa and Pima counties. The economies of these two metropolitan counties are quite different than the state as a whole and therefore should be calculated separately.

Second, starting in January 1994, census data used as variables in LAUS calculations for cities, towns, and unincorporated areas will be updated, improving the accuracy of subcounty employment and unemployment rate estimates. Currently, proportional breakdowns based on 1980 census data are still being used to produce monthly subcounty statistics.

Summary

In conclusion, it is important to remember that monthly CES and LAUS estimates are not designed to be an exact measure of the level of total employment, non-farm payroll employment, or the unemployment rate. An accurate level is set once a year by the benchmarking process.

What the monthly figures do measure is *change*. However, because of the factors mentioned earlier, Research Administration (RA) cautions users of CES and LAUS data against putting too much emphasis on data for any one month; rather, RA recommends looking at a minimum of three- or fourth-month trends.

Nevertheless, Arizona's monthly CES and LAUS numbers remain important because they are the first reliable estimates of the direction of the state and substate economies. Because of this fact, BLS and Arizona's CES/LAUS unit will continually work to improve their accuracy.

—Phillip Heinrich
CES/LAUS Supervisor

Notes:

1. Benchmarking covers estimates through March of the previous year. For example, benchmarking in March 1992 covered CES estimates for period from April 1, 1990, through March 31, 1991.
2. "Job losses in '91 might be doubled," *The Associated Press*, printed in *The Arizona Republic*, Feb. 5, 1992. AET

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